

PATENT APPLICATION



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of

Norihisa FUKUTOMI, et al.

#45/IDS

Application No.: To be assigned

Group Art Unit: To be assigned

Filed: October 6, 1999

Examiner: To be Assigned

For: FUEL INJECTION VALVE

INFORMATION DISCLOSURE STATEMENT  
UNDER 37 C.F.R. §§ 1.97 and 1.98

Assistant Commissioner for Patents  
Washington, D.C. 20231

Sir:

Pursuant to Applicants' duty of voluntary disclosure under Rule 56, and for the Examiner's convenience, we submit herewith:

- a) a form PTO-1449 listing seven (7) references of potential relevancy; and,
- b) a complete copy of each reference.

No certification or fee is required.

Regarding the concise explanation of relevancy requirement for foreign language documents, a brief English language summary is attached for each reference. The applicants wish to draw the Examiner's attention to co-pending allowed U.S. Application Serial No. 08/869,919, filed June 5, 1997.

Respectfully submitted,

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Date: October 6, 1999

INFORMATION DISCLOSURE STATEMENT

JCS25 U.S. PTO  
09/413348



Given below are prior arts with their brief descriptions.

Japanese Literature

(1) Japanese Laid-open Patent Application No.8-74699

Within the storing hole of the valve body, a stepped surface is formed and a shim for position adjustment of the valve sheet member is interposed between the stepped surface and the large diameter portion of the valve sheet member.

(2) Japanese Laid-open Patent Application No.9-303235

Fuel swirling type is adapted in which the fuel injection is carried out by exerting a swirling force on the fuel by the swirler provided at the upstream of the fuel injection hole, and a fuel passage is provided for forming fuel spray filling the inside the swirl fuel spray.

(3) Japanese Laid-open Patent Application No.9-324722

By sharing the function of fixation and sealing between the body and the valve sheet, the O-ring for prevention of fuel leakage becomes unnecessary.

(4) Japanese Patent Application No.2774153

An electromagnetic valve for fuel injection unit is provided with a ferromagnetic element for guiding the magnetic flux flow at the portion where the plastic jacket encloses the electromagnetic coil.

(5) This number denotes Japanese Laid-Open Patent Application Number 10-506448 after shift to Japan of the PCT Application NO.PCT/US/10108

In order to define the passage of both of the terminals (50, 52) from the electromagnetic coil (18), a single through hole is provided in the housing.

(6) Japanese Laid-open Utility Model Application No.6-4366  
In order to prevent a breakage of the coil bobbin caused by the fuel pressure, forming a small diameter portion and a large diameter portion on inner wall of the fuel pipe of the main body, the ring member and the O-ring member are engaged with fitting into the small diameter portion so as to sealing the fuel pipe with them.

(7) Japanese Laid-open Patent Application No.10-47198  
In order to obtain a fuel injection valve for intracylindrical injection without causing a fuel leakage, the O-ring is provided on the side of the fuel pressure application within the space enclosing the coil assembly, the housing and the core.

#### Foreign Literature

US Patent Application No.08/869,919

(US Patent Application NO.08/869,919 is the patent application corresponding to the Japanese Laid-Open Application NO.10-47198.)